

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
**WO 2004/110099 A2**

(51) International Patent Classification<sup>7</sup>: **H04R 25/00**

(74) Agent: ALBIHNS A/S; H.C. Andersens Boulevard 49,  
DK-1553 Copenhagen\_V (DK).

(21) International Application Number:  
PCT/DK2004/000389

(22) International Filing Date: 7 June 2004 (07.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PA 2003 00856 6 June 2003 (06.06.2003) DK

(71) Applicant (for all designated States except US): GN RE-  
SOUND A/S [DK/DK]; Maarkaervej 2A, DK-2630 Taas-  
trup (DK).

(72) Inventor; and

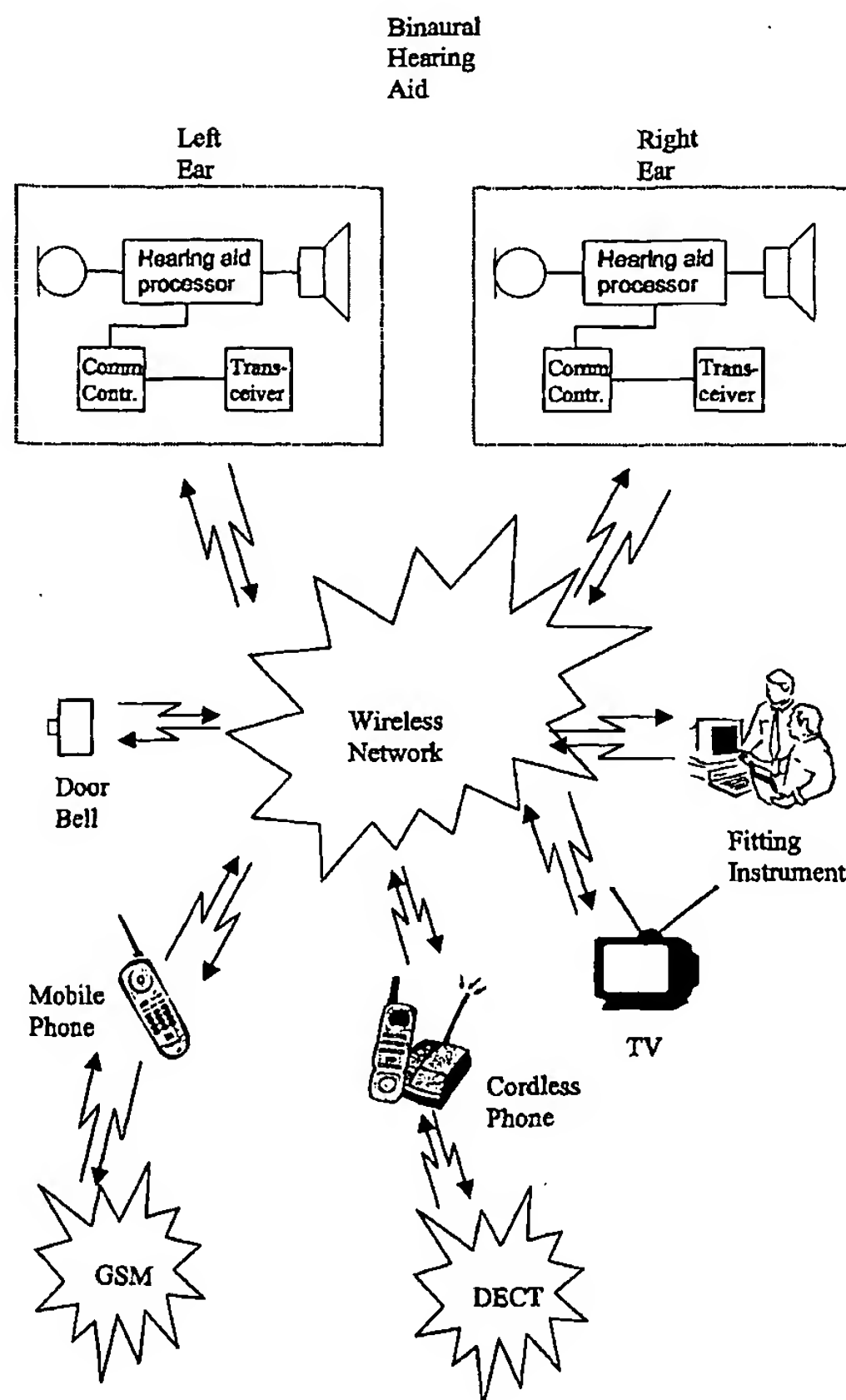
(75) Inventor/Applicant (for US only): LARSEN, René, Rye  
[DK/DK]; Aldershvilevej 127, 1tv, DK-2880 Bagsværd  
(DK).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: A HEARING AID WIRELESS NETWORK



(57) Abstract: A hearing aid is provided comprising a transceiver for interconnection of the hearing aid with a wireless network for communication with a plurality of other devices, and a communication controller that is adapted for controlling data exchange through the network in accordance with a simple network protocol. The hearing aid wireless network facilitates interconnection of a plurality of devices in the network, such as hearing aids, remote controllers, fitting instruments, mobile phones, headsets, door bells, alarm systems, broadcast systems, such as tele coil replacement, etc, etc. In an established network, the network master device, in a connected mode, regularly transmits synchronization data, e.g. comprised in a link management package, for synchronization of the slave devices in the network with the master device. During initialisation of the network, for example upon turn-on of two hearing aids, each device in an acquisition mode transmits interrogation data, e.g. comprised in a link management package, at a higher rate than the rate of transmission of the synchronization data in the connected mode. The provided acquisition method has low power consumption during execution and it is fast.

WO 2004/110099 A2



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*